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ABSTRACT

This book presents research undertaken as a two-year investigation of two sets of related questions about teacher understanding concerning rational numbers, quantity, and proportional reasoning and how this knowledge affects teachers' awareness of how students learn. Chapter 2 provides a conceptual framework. Chapter 3 presents detailed information on the methodology of the study regarding issues related to validity, reliability, and ethics. Chapters 4-10 directly address the two research questions that guided the study. Chapter 4 explores the effects of the seminars with the teachers on their development of mathematical understanding and understanding of how students learn mathematics. Chapters 5-9 discuss the case studies of five of the teachers associated with the project. Chapter 10 contains an analysis of the student data. Contains 108 references. (ASK)

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